

Appendix B
Clean Copy of All Pending Claims

81. A kit for diagnosing infection with a causative agent of Lyme Disease in a human or animal comprising a protein or peptide of claim 103.

103. A recombinant or synthetic protein or peptide that reacts with antibodies to the causative agent of Lyme Disease in infected humans or animals, said protein or peptide selected from the group consisting of:

- (a) an amino acid sequence of SEQ ID NO: 2;
- (b) an amino acid sequence of SEQ ID NO: 14;
- (c) an amino acid sequence encoded by SEQ ID NO: 3;
- (d) an amino acid sequence encoded by SEQ ID NO: 7;
- (e) an amino acid sequence encoded by SEQ ID NO: 11;
- (f) an amino acid sequence of a fragment of (a) through (e) of at least five amino acids in length; and
- (g) an amino acid sequence that differs from a sequence of (a) through (f) by up to four codon changes in the nucleic acid sequence encoding the amino acid sequence.

104. The protein or peptide according to claim 103, wherein said fragment is at least eight amino acids in length.

105. The protein or peptide according to claim 103, wherein said peptide or protein is coupled to a substrate that immobilizes said peptide or protein.

106. The protein or peptide according to claim 103, wherein said peptide or protein is coupled to a detectable label or signal generating reagent.

107. The kit according to claim 81, further comprising at least one of the group consisting of a substrate that immobilizes said peptide or protein, a detectable label, a labeled conjugate, and a signal generating reagent.